## Practical Set – 1

### Program 1.1: To print grade using else..if ladder.

```
v = int(input("Enter your marks : "))
if v>=81 and v<=100:
   print("Your grade is : A ")
elif v>=61 and v<=80:
   print("Your grade is : B ")
elif v>=41 and v<=60:
   print("Your grade is : C ")
elif v>=33 and v<=40:
   print("Your grade is : D ")
elif v<33 and v>0 and v<100:
   print("You are Fail...")
else:
   print("Invalid Marks Entered...")
```

**Output :**

```
Enter your marks : 78
Your grade is : A
```

### Program 1.2: find the largest ODD number from given 10 numbers.

```
list = [412,6,91,36,102,105,8,54,64,89]
print("Given 10 numbers are : ",list)
l3= []
count = 0
for x in range(10):
   if list[x] % 2 != 0:
      l2 = [list[x]]
      l3 = l3 + l2
      l2 = []
      count = count + 1
if count==0:
   print("There is no any odd number...")
else:
   max = l3[0]
   #print(max)
   for x in range(count-1):
      if max < l3[x+1]:
         max = l3[x+1]
```

```
    print("Largest odd number is : ",max)
```

**Output :**

```
Given 10 numbers are :  [412, 6, 91, 36, 102, 105, 8, 54, 64, 89]
Largest odd number is :  105
```

### Program 1.3: To add two (n*n) matrix

```
n = int(input("Enter N for N*N Matrix : "))
mat = []
print("Enter element for first matrix (Row wise) : ")
for x in range(n):
    m = []
    for y in range(n):
        m.append(int(input()))
    mat.append(m)
mat2 = []
print("Enter element for second matrix (Row wise) : ")
for x in range(n):
    a = []
    for y in range(n):
        a.append(int(input()))
    mat2.append(a)
print("First matrix : ")
for i in range(n):
    for j in range(n):
        print(mat2[i][j], end=" ")
    print()
print("Second matrix : ")
for i in range(n):
    for j in range(n):
        print(mat[i][j], end = " ")
    print()

print("After adding two matrix : ")
mat3 = []
for i in range(n):
    b = []
    for j in range(n):
        c=mat[i][j] + mat2[i][j]
        b.append(c)
    mat3.append(b)
for i in range(n):
```

```
    for j in range(n):
        print(mat3[i][j], end=" ")
    print()
```

**Output :**

```
Enter N for N*N Matrix : 2
Enter element for first matrix (Row wise) :
5
1
3
2
Enter element for second matrix (Row wise) :
1
8
6
2
First matrix :
1 8
6 2
Second matrix :
5 1
3 2
After adding two matrix :
6 9
9 4
```

**Program 1.4: To write efficient function for Prime Number check. Also count how many prime numbers are there which is less than given number.**

```
def prime_no(n):
    if n > 1:
        for i in range(2, n):
            if (n % i) == 0:
                print(n, " is not a Prime number")
                break
        else:
            print(n, " is a Prime number")

    else:
        print(n, "is not a prime number")

n = int(input("Enter any number : "))
```

```
prime_no(n)

count = 0
for j in range(2,n):
   for i in range(2,j):
      if(j % i) == 0:
         break
   else:
         count = count + 1

print("Total Prime numbers which are less than given numbers are : ",count)
```

**Output :**

```
Enter any number : 51
51  is a Prime number
Total Prime numbers which are less than given numbers are :  15
```

### Program 1.5: To print days of month using switch case

```
m = int(input("Enter no of month : "))
def days(m):
   switcher = {
      1: "There are 31 days in this month.",
      2: "There are 28/29 days in this month.",
      3: "There are 31 days in this month.",
      4: "There are 30 days in this month.",
      5: "There are 31 days in this month.",
      6: "There are 30 days in this month.",
      7: "There are 31 days in this month.",
      8: "There are 31 days in this month.",
      9: "There are 30 days in this month.",
      10: "There are 31 days in this month.",
      11: "There are 30 days in this month.",
      12: "There are 31 days in this month.",
   }
   return switcher.get(m, "Enter valid month number...")
print (days(m))
```

**Output :**

```
Enter no of month : 8
There are 31 days in this month.
```